VOL. VI. No. 25. DECEMBER 9, 1909

THE JOURNAL OF PHILOSOPHY
PSYCHOLOGY AND SCIENTIFIC METHODS

## CONCERNING A PHILOSOPHICAL PLATFORM[1]

THE philosophical convictions of individuals as well as philosophy itself may be considered from the point of view of evolution. They are in a constant flux, changing sometimes slowly and imperceptibly, sometimes almost abruptly; and the apparently stationary elements may still be considered as changing with a speed approximating zero. However, to make this flux intelligible, we must break it up, we must make sections, that is, we must distinguish *definite stages* from which and toward which the evolution is conceived to take place; these stages will usually be points where more or less pronounced changes take place, or they may simply be determined by time-intervals. The apparently natural flux is, thus, more or less arbitrarily broken up into a number of points which indicate its flow, just as, in geometry, the arbitrarily chosen points indicate the curve. If evolution is the problem, it is clearly necessary to choose as many points in the development as possible, and the *continuum* must always be the ideal which we try to approximate. The discrete points are merely the scaffolding; they are, though necessary, purely auxiliary, to fix and comprehend the evolution.

We have become so embued with the spirit of evolution that we sometimes seem almost unable to treat things with any but its categories, to conceive it as the only "natural," the all-important "generating problem." Whilst, of course, no one dreams of denying its legitimacy and possibility, it is still important to urge that other points of view are possible, other "generating problems" to the solution of which evolution makes no contribution whatever. Such a point of view is *value,* and it is the decisive one if our philosophy is to become a basis for *action;* then this whole process of evolution may still be admitted, but is of no consequence; the views I hold now are, then, what concern me; I must "make up my mind," "make my

[1] Read, in part, at the meeting of the American Philosophical Association in Baltimore, 1908.

choice''; neither the ultimate philosophy, nor the absolutely best philosophy, but the best within reach, the best in so far forth, will be the determining one. Those definite stages, which were, from the point of view of evolution, though necessary, still purely auxiliary, are now the controlling idea. And this present stage of development in my philosophical convictions which shall form the basis of my present action must be the more definite, specific, and articulate, the more definite, specific, and articulate the conditions of my action are. Not that we always consciously formulate our convictions, but our actions commit us to certain convictions; we act, at least, *as if* we had them.

Now my thesis is that philosophy itself is called upon to act, and that therefore it is incumbent upon every age to make up its mind, to occupy and maintain some definite stage in this process of evolution that philosophy is undergoing, and not to use the idea of evolution as a convenient excuse for indefiniteness and absence of a doctrine and recognized school in philosophy.

That philosophy is, indeed, required to act I shall show in typical instances.[2] These are chosen from the realm of ''science,'' not because here alone they are to be found, nor even because they are the most important and urgent; theology and law make very definite demands upon philosophy. The reason is merely the personal one, that to me the philosophical needs of mathematics and natural science have been more pressing and immediate than those of the other disciplines.

Like most of you, who have not an own system to recommend and to defend, I have been dissatisfied with the philosophies that have come to my knowledge, living as a quiet student in the hope and quest of a world-view that would answer my needs. And, so far as my philosophy alone is concerned, what possibility is there but to patiently work and wait until the crystals form in the mother-lye? But the *social* function and duty of philosophy in the republic of

[2] In doing this I have sometimes felt as if I were carrying coals to Newcastle; the only question of real importance seemed: How can we make possible such a platform as this necessity for action demands? Still, it appears, in the light of the discussion at the Baltimore meeting (which Professor Creighton continues in his paper in this JOURNAL, supported by Professors Davies and Leighton), that to others such an agreement does not even seem *desirable;* but it will have to be admitted that, where there is a question of *necessity,* the desirability must be a neglected issue. The justified element in the aversion to a platform, which is expressed in this lack of desire for it, will, I think, be satisfied by the idea of "equivalent systems of philosophy," which I develop later in this paper. But if the opponents imagine that "agreement" means necessarily slavish adherence to the same system, I merely point to mathematics, where such agreement as I mean already exists compatible with that freedom which Georg Cantor, I believe, declared to be the "essence of mathematics."

knowledge was forcibly brought home to me by reading a book by Dr. Paul Dubois, of the University of Berne, on "The Psychic Treatment of Nervous Disorders." Not satisfied with merely giving a description of methods that he had found useful, the author seeks a philosophical foundation of his theory. And, indeed, complications with philosophy are unavoidable to any but mere routine and surface-workers! It is particularly the concept of moral responsibility that engages his attention. No one with any philosophical interest at all can have made even a superficial study of neurasthenia in any severe form without meeting this concept and its bearings at all times. The conviction of powerlessness seems the predominating feature of the disease, the inability of the patient to see and to accept what is perfectly clear to you, and, if you succeed in convincing him by repeating again and again the same argument in all possible variations and luckily striking the form that appeals to him, the inability, at least at the time, to carry it out in action; and all this in people who otherwise have shown clearness of mind and great strength of character. Now it is indeed of interest, but of no consequence here for us, who are not discussing moral freedom and responsibility, that Dr. Dubois most emphatically rejects this concept as contrary to all plain reason and unfit as a working hypothesis in his field; but it is of consequence to us that in his philosophical need the excellent author should have been left without any recognized doctrine of ethics to accept or to combat. Not that he failed to look around for information! But the case is typical. The other disciplines have to rely on the results that philosophy reaches; deep, original, and path-breaking minds are fully aware of this, but are thrown back on their own resources, their own reason, this "most precise instrument of work," as Dr. Dubois calls it, after a vain quest for definite results that could be used.[3] And what else can the scientist do so long as the workers in the various branches of philosophy are agreed neither as to the fundamental

[3] Both Professor Creighton and Professor Leighton deny the possibility or desirability of furnishing such definite results, and both deduce this definite result "from the very nature of philosophy." See this JOURNAL, Vol. VI., pp. 142 and 520. I must confess the cogency of their reasoning escapes me, particularly as both profess, on almost the same page, that a platform does already exist! Leaving, for the moment, the question of possibility aside, I ask: Do you mean to deny that it is incumbent upon philosophy to furnish some definite results in such a question as moral freedom? To be frank, I believe that at bottom we are really agreed on the necessity of supplying such definite results; but, overawed by the conceived enormity of the undertaking, we despair of its possibility and try to resign ourselves to the belief that, philosophy not being "one of the special sciences" (p. 142), "assured results" (p. 520) can not be expected of it. But I beg you to ponder the consequences of such resignation!

problems they set out to solve, nor in the solutions they offer, nor even in the ideal they strive to attain? Is the fundamental problem of ethics the description of so-called moral actions, or is it to find their cause in a so-called moral sense, is it to discover and establish moral values, an "*Umwertung der Werte,*" or is it the examination of the idea and of the principles of a possible pure will, or is it something quite different from any of these? Is the scientist supposed to take his choice according to what appeals to his reason? Or must it be admitted that the reason of the expert is the more precise instrument of work and ought to decide here, as it does in the other disciplines? And do we find any better agreement, if we ask: what is the fundamental problem of philosophy itself? And if we ask totally different questions, how can we expect agreement in the answers? But why accumulate instances, when we all are ready to admit[4] that no branch of philosophy has, in the republic of knowledge, performed the duty which is its part to fulfil.

But if no accepted solutions exist of questions, such as that of moral responsibility, which lie *completely within* the realm of philosophy, still less can we expect any agreement regarding problems *in the sciences themselves* that call for a philosophical solution. Take, for example, the work of modern mathematicians on the axioms of mathematics. I will not contend here that this would have to be considered as a philosophical question, if we assume that philosophy is "the science of first principles."[5] But consider: the geometers establish the axioms of geometry; the algebraists offer those best suited to their department. They find that, in either case, there is a choice among various sets and discuss their respective values according to definite principles. However, whilst it is, no doubt, important to keep the lines of demarcation between algebra and geometry, it is, on the other hand, undeniable that such mutual independence is true only in methodical abstraction, and that they not only interpenetrate each other in the application of one to the other, but that

[4] Nothing is more apt to prevent the proper solution of a problem than to imagine that it already *exists*, at least within the limits in which it is possible of attainment. This is the position of Professors Creighton and Leighton. However, one need only look through the papers read at the Congress of Arts and Sciences in St. Louis to be impressed by the uniformity with which the various speakers on philosophy give utterance to the necessity of coming to an agreement on the "definition" of "metaphysics," "logic," "ethics." Of course, there is *implicit* agreement; but such implicit, I almost said *instinctive*, agreement is not sufficient to base any reasoning upon; the agreement, to be serviceable in the various problems of which I mention types in the first part of my paper, must be *explicit, definite*.

[5] See Kant's remarks on this "definition" of philosophy in the "Critique of Pure Reason," p. 545 (academy edition, Vol. III.).

they have common hypotheses and concepts. And before we can, therefore, adopt a set of axioms as best suited to either department, it will be necessary to consider the sets in their relation to each other; and it may be necessary to adopt a set of axioms for mathematics itself, considered as a whole, which would be the best neither for algebra nor for geometry taken separately; the question of the axioms of mathematics, as distinguished from the axioms of algebra or geometry, presents itself. However, so far, it may be maintained, we are still in the realm of mathematics; let mathematicians take care of these axioms! But the connection of algebra of logic with algebra and even with geometry,[6] of mathematics with mechanics and physics and even metaphysics, demands consideration; and the whole question, as it deepens, widens until it bursts the bounds of any one special science; it becomes ultimately one of a group of problems to which the name "philosophical" has been vaguely attached.[7]

But no set of axioms is possible without a set of fundamental concepts. Mathematicians have, of late, come either to consider these fundamental concepts as defined by the axioms (as Hilbert and others), or to define them in terms of "logical" concepts, and to use these definitions in the place of axioms in building up their systems (as Dedekind has done). I will not dwell on the question of the relation of an axiom to a definition which is raised by these different procedures, and which seems to me eminently a philosophical question, the careful treatment of which would help to clear many points of method at present under discussion; but I will emphasize that these fundamental concepts, however supreme the importance of their treatment by the scientist, can not ultimately be chosen by any single discipline such as mathematics or mechanics; we know now that, so far as they are concerned, a choice is possible among various groups of fundamental concepts (though it is still an open question how far we are free to choose); and scientists will select those that work best in their realm; but the very ideal of cognition which the scientist is following pushes this question beyond the bounds of science to the problem of categories, which, in turn, must influence the choice of fundamental concepts in the special sciences. Besides, these fundamental concepts have their

[6] See Professor Royce's paper, in the *Transactions of the American Mathematical Society*, July, 1905, on "The Relation of the Principles of Logic to the Foundations of Geometry."

[7] As no generally accepted definition of "philosophy" exists, so far as I am aware, I shall, in claiming any group of problems to fall within the realm of philosophy, apply here, besides the usual meaning of the term, the negative test: *not* problem of any of the recognized special sciences.

realm, whose proper determination and consequent limitation requires a distinct (and we may call it a philosophical) investigation.

As a third problem arising within science that calls for a philosophical treatment I will mention the principles by which the scientist determines the value of the various possible sets of axioms. These principles, their establishment, examination, and methods of proof are so closely connected with purely logical considerations that fall outside the scope of any "scientific" department as to make them a proper province of philosophy. Still more will this be evident, if we consider that they define an *ideal* of science. For this ideal is in opposition to other ideals, and needs, therefore, an examination of its own value and competence. It may be, as some have claimed, a mistaken, or even impossible, ideal, it may be the only true ideal of cognition; in either case, the question can not be decided by the scientist himself any more than it can be decided without him and his labors.

Lastly, let me call attention to such questions as the *definition* of mathematics. This, surely, can not concern anybody but the mathematician himself, so it seems. And, indeed, if we merely want to collect the common characteristics of the recognized branches of mathematics into a *descriptive* definition (if I may use this expression), this may be so. And yet, even then, do we soon strike such questions as: Is arithmetic (and with it algebra and analysis) a part of logic, as Dedekind, Schröder, and others have maintained, or is logic (mathematical logic) a part of algebra, as Whitehead, Couturat, and others have treated it, or are logic and mathematics really one and the same, as Russell is inclined to think? But above all, how barren such a definition would be! A real definition must be a program of work; it must be systematic; mathematics would then be considered as a part of the whole system of cognition, a part with its definite function which can be properly assigned only by a consideration of the whole.

I have thus briefly indicated definite questions where philosophy is called upon to act; their answer presupposes a definite system of philosophy; and no one can, with an open mind, have followed the discussion on the principles of mathematics or of mechanics without noticing at every step, half hidden, half acknowledged, the philosophy of the system-building scientist. And how often are his efforts paralyzed because, after all, the philosophy is only *his* philosophy! But on which system shall he rest his work, if all is controversial? Shall it be left to the chances of a necessarily limited education and to his private opinion? And a mere outline, a general world-view, is not sufficient; the questions met with are definite, specific, articu-

late, and require a correspondingly definite, specific, and articulate philosophy; that is, they require a *system* of philosophy. How can it be provided?

In spite of the repeatedly emphasized differences between philosophy on the one hand, mathematics and the physical sciences on the other, it seems to be growing more and more apparent and recognized that they all cooperate on one general problem, namely, the establishment of a system of interrelations between the concepts necessary and sufficient for the solution of the various special problems which we set ourselves and for which the term "experience" stands. If we look thus at the so-called special sciences it must be to us in our distress a comfort to notice that mathematics and physics have already attained that steady progress and orderly procedure which make every honest piece of work a contribution, however modest, to the advancement of science. Their example which we need not imitate, may, nevertheless, be instructive. How is it possible that, with absolute freedom of research and opinion, order and uniformity in the department are maintained; how is it possible that, in spite of uncertainty on many points and dissension of opinion, a definite, recognized, and serviceable doctrine is maintained; how is it possible that, in spite of revolutionary discoveries, science is steadily moving on without losing the confidence placed in it? It certainly is possible. What can be done to reach this same condition in philosophy?

Few even of the mathematicians are quite clear about the changes in the appearance of geometry that would result from the adoption of one of the new sets of axioms that have been worked out of late, even if we consider only those that restrict themselves to Euclidean plane geometry. In mechanics, it may seem a trivial difference whether we take as fundamental concepts space, time, mass, and force, or only space, time, and mass, adding an hypothesis which shall be the equivalent of force; and yet, what a difference in the appearance of Newton's and Hertz's systems of mechanics! Such changes as the modern work on the foundations of mathematics and mechanics involve are nothing short of revolutionary! And yet, if the engineering student calls in the help of geometry, it is still Euclid's geometry that is offered him and that serves him; if he needs mechanics, it is Newton's system; in spite of the trenchant criticisms that have been leveled against Euclid's axioms, in spite of the doubts of the logical purity of Newton's system that troubled Heinrich Hertz! To be sure, the work of all these investigators is not done in vain; slowly and steadily mathematics and science will absorb their results. However, it will be a transformation, not a revolution; the good of the new will be blended with the good of the old, after the

alternatives have been weighed sufficiently. The momentum of the school acts like a fly-wheel to keep a science from erratic and premature changes. This steadiness is indispensable for making possible the serviceableness of science. We have shown in typical instances that philosophy also is called upon to act; it can not act without having a definite form which we must choose and maintain comparatively invariant. But a definite form of philosophy as such, not of individual convictions, means a recognized doctrine and school; or, if you please, a ruling party, which shall transact the business on hand, until it (which means its principles) is replaced by the opposition party, whose very existence and criticisms are necessary for a healthy growth and functioning of the ruling party itself. And I see no escape from the thought, reactionary or even ridiculous as it may seem, that we philosophers must, *for a start,* deliberately choose a system on which we are most ready to unite, not because it will fit any one of us exactly—none does but our own home-spun—but because we must have something definite, until we can, clearly and consciously, make the change to a new school-philosophy. The abolition of a recognized authority in philosophy by the renaissance, however we may be in sympathy with the new spirit, has been a decided disadvantage. We philosophers are too much possessed with the destroying instinct, though, in fact, we never do as much harm as we set out to do. Even the most original thinkers (such men as Kant, who appeared to his contemporaries supremely as the *Alleszermalmer*), how conservative after all, how much of the *perennis philosophia* in their thought and systems! The state of anarchy, which, in spite of the temporary successes of Descartes, Leibniz, Kant, and Hegel in establishing schools, is still prevailing, must end; this we all feel and the necessity for action demands it. Let us then learn this as a lesson from mathematics and science: to choose a system as authority with which we can start, which we can criticize, measure by certain ideals, change, mend, supplement or finally discard for a better, but all with due deliberation and for definite, specific reasons. For the promotion of such an end, the meetings and discussions of the Philosophical Association seem to offer a suitable opportunity.

However, such an agreement, even if possible, could only be considered as a starting-point demanded by the exigency. We must examine the authority, we said, improve it or discard it for a better system. Such systematic and persistent criticism is, indeed, the safety-valve which should prevent sudden revolutions; but it implies that we have an *ideal,* by which to measure the school-philosophy itself as well as our own efforts; otherwise, we can not know whether we are really advancing, *or even what an advance means.* And again, no vague ideal, such as we all more or less unconsciously carry

with us, will do for such definite work as is necessary; no mere hunting for contradictions—critique, systematic and according to well-established *principles,* is what we need here; these principles should completely define the ideal of philosophy; they may be conceived as *conditions* which systems of philosophy must satisfy. This implies, further, that definite methods should be developed by which we can test the satisfaction of our principles in any concrete case. Mathematicians and scientists have, during the past century, more and more completely defined their ideal.[8] The same should be done for philosophy, and the work already done by mathematicians will be of the greatest value. This ideal, set forth in definite conditions, with their tests, will be the instrument by means of which we, in submitting ourselves to the authority, work out our own independence and true originality.

These principles of "critique of cognition" will be directly applicable to systems of philosophy, if the latter can be given a special form, which I will call the "generating-problem-deductive-system" form, or more briefly the "complete-deductive" form. I shall explain what I mean by this, show, by an investigation of the conditions under which the transformation is possible, that any system of philosophy can be brought into this form, and indicate the advantages gained by this transformation; they cluster around the important concept of *"equivalent systems" of philosophy,* a concept, already familiar to mathematicians, which, if introduced into philosophy, will open up new fields of inquiry of the utmost importance for the idea of a philosophical platform.

The idea of a "deductive system" is familiar to all; its classic representative is Euclid's system of geometry. Its essential features are the definitions, the axioms (postulates, etc.), and the propositions which are "proved" by means of the axioms and definitions. These proofs consist mainly in the exhibition of the *interrelation* between propositions and axioms. The modern work on the foundations of mathematics has shown that the difference between proposition and axiom is not radical, that they may be interchanged (which change will, of course, produce different systems). We may therefore say: the deductive system exhibits the interrelation between the various propositions of the system. The system may be considered as a "tissue,"[9] which the deductive system presents in a polarized, or

[8] See my paper on "Critique of Cognition and Its Principles," this JOURNAL, Vol. VI., p. 281.

[9] See Mrs. Ladd Franklin's paper on "Histurgy," read before the American Philosophical Association in Baltimore, 1908; also Schröder's "Algebra der Logik," Vol. II., part 1, p. 55. Mrs. Franklin's paper should be consulted for the whole question of a philosophical platform. See the briefer form of Mrs. Franklin's paper in the "Proceedings of the Heidelberg Congress of Philosophy" for 1908.

directional, form. This form, artificial in that it makes fundamental the, otherwise irrelevant, *order* of the propositions, offers definite advantages, although they are not the ones which were expected by the originators of the form: they thought that by the "proofs" the "difficult propositions were made to participate in the clearness of the "self-evident" axioms.[10] It quite often happens, in mathematics, that the axiom is much less "self-evident" than the proposition which is proved by its assumption. The advantages seem to lie rather in this: (1) the deductive form is, thus far, the only one which really does completely exhibit the all-important interrelation between the various parts of the system, so that any assertion or denial becomes *more momentous,* so to say, by the consequences that we *know* are involved in it; (2) we can in this form most easily ascertain whether the propositions of the system *apply* in any particular realm, by merely investigating whether the "axioms" are applicable in the realm; (3) we can in this form best ascertain the *limits* of the applicability of the system (*i. e.,* determine the realm of the generating problem); and (4) we can most readily determine whether any two systems are *equivalent* or not. And this last advantage is the one I want to emphasize here.

But before entering into the question of equivalence, I will briefly state the necessary and sufficient condition which a system must satisfy so as to be transformable into this form. This condition follows immediately from the "definition" of a deductive system; it requires that the propositions of the system are *fixed, non-equivalent,* and *interrelated. And this condition any system of philosophy is supposed to satisfy; it can, therefore, be put into the deductive form.*

It remains to show briefly what is meant by the "generating problem" of a system. In the above account of the deductive form the axioms are said to be "assumed." This hypothetical character gives them an appearance of arbitrariness which in reality they do not have, as becomes clear if the system is considered as the *solution* of a *problem.* This problem, once stated and recognized, can be logically considered as generating the system; the axioms derive their necessity, not from any superior clearness or immediate evidence (which they, in mathematics at least, certainly and admittedly do not possess), but from the fact that they are necessary for the solution of the once accepted problem. Such a problem I have therefore called the "generating problem,"[11] to distinguish it from

[10] Plato, who ought to be considered the true originator of the form, did not fall into this error; the starting-point of his deductions is not the "self-evident" axiom, but the *hypothesis* which the interlocutors grant. Modern investigators are more Platonic in this respect than the early successors.

[11] See the aforementioned paper on "Critique of Cognition."

the "special problems" that are considered as logically underlying the special propositions. So we may consider as the generating problem of mechanics: "to deduce from the properties of material systems which are *independent* of time, their phenomena which occur *in* time, and their properties which depend *on* time." I take this statement from Heinrich Hertz's "Principien der Mechanik" merely on account of its clearness and articulateness. I can not dwell here on the advantages of thus conceiving a system; but it is clear that the definition of a science like mechanics can best be given in terms of its generating problem. And we can now conceive of a *system of problems,* in which each generating problem itself may play the rôle of a special problem. Such a system of problems would then determine a purely logical classification of sciences, and each special science would be the realm determined by its generating problem. It would greatly contribute to a mutual understanding amongst philosophers, if we could determine the generating problem of philosophy, or, at least, of its recognized branches. Indeed, this question or an equivalent of it will clearly have to be settled before we can define, by a group of conditions, either the scope or ideal of philosophy: it must be settled what we start out to do, when we develop a system; and what we start out to do, definitely and completely stated, will constitute the generating problem. In such a statement a great amount of freedom will be left; history will in part serve as a guide, but only in a comparatively small degree; for what has been considered the generating problem of a system may be extremely valuable as a hint, but need not necessarily constitute, or even be contained in, the true generating problem; questions of logical subordination will play an important part here; ultimately the systematic point of view will be decisive. Such specific and definite statement of the generating problems will result, I believe, in an increase in the number of recognized branches of philosophy and a consequent corresponding cessation of strife on fundamental questions.

So much, then, for the explanation of the term "complete-deductive-system." We are now prepared to state what is meant by "equivalence" of any two systems of philosophy. Let us call the two systems under investigation $S_1$ and $S_2$. They will be called equivalent, $S_1 = S_2$, if they satisfy the following conditions: (1) the generating problem of $S_1$ is contained in that of $S_2$, and *vice versa;* (2) the solution of the generating problem of $S_1$ can be deduced from that of $S_2$, and vice versa.[12] If , now, the system under investigation

[12] It is easy to notice that, in the language of my paper on "Critique of Cognition" this means that $S_1$ and $S_2$ have the same "completeness"; this is, indeed, here the important point of view; but, strictly speaking, this point of

is transformed into the "complete-deductive-system" form, we need merely to establish, besides the equivalence of their generating problems, the equivalence of their "axioms." If this is possible we can immediately assert: any special problem which can be solved in the realm of $S_1$ can also be solved by the "axioms" of $S_2$. The systems are "practically" (namely with respect to their conceivable consequences) the same—though they may be very different in structure and appearance. But for purposes of a philosophical platform any one system may be *replaced* by any other which is equivalent to it. The determination, whether any two systems are equivalent or not, becomes, therewith, itself a momentous question. Non-equivalent systems may then be considered from the point of view of exclusion or inclusion; non-equivalent systems may often be *made* equivalent by adding further conditions. But we can not here follow up these remarks any further, excepting to point out the effect this idea of a generating problem and of equivalent systems has on the study of the so-called history of philosophy, the importance of which Professor Creighton has urged in his paper on the question of a philosophical platform in this JOURNAL. The usual method emphasizes the point of view of evolution. This is of course itself a perfectly legitimate generating problem; but so far as the question of a philosophical platform is concerned—*i. e.*, the question which system we should accept as our system—this evolution history of philosophy is of no importance except incidentally. However, this mass of material which is represented by the philosophical systems of the past may be organized and made available for our question, if we treat it from the point of view of the generating problem. By this I mean: to make the paramount interest not the genesis of a system, its "history," the vestiges of the past and the germs of the future, but is purely *logical* content, by asking, What are the generating problems of the various systems and what their solutions; and are they, in spite of all apparent differences, equivalent with respect to completeness or not? Here is a broad field, almost untouched, of "historical" research of the utmost value to the "working" philosopher (if I may adopt a phrase often used by mathematicians), work which can be done by specialization in any one particular field, without presupposing an almost impossible amount of knowledge; and our "histories" of philosophy, in giving up a pretended breadth, would increase their depth immeasurably.

view should always be stated in any assertion of equivalence; we might, therefore, say that $S_1$ and $S_2$ in our definition are *equivalent with respect to completeness;* whilst by equivalence without specification we might mean that $S_1$ and $S_2$ satisfy *all* the conditions of "critique of cognition."

Having proceeded thus far in this formalistic direction, I can not but take a further step and urge the use of so-called symbolic logic which seems, until recently, to have had the luck of falling between the chairs of mathematics and logic, the mathematician spurning it as logic, the logician saving himself needless exertion because it was only "algebra." I will not insist on it here as an engine of invention, as a method of solving problems which are as inaccessible to common unaided reasoning (even if highly developed and drilled in our ordinary logic), as problems in algebra are to one who is master merely of arithmetic; but I will urge the advantages to be gained by the adoption of a precise means of expression, far superior to any *verbal* statement in exactness, simplicity, and lucidity.[13] To be sure, in "Algebra of Logic" we find again the same lack of agreement, the various schools clinging to their own special symbolism; this is, however, of smaller consequence and can largely be made harmless by proper "keys" to translate from one into the other. But the question whether "symbolic" logic should be used at all or not, ought to be fairly settled, not by clever writers unfamiliar with its first principles, but by the consensus of the competent. Generating problems and their solutions, transformed into the deductive form, stated in symbolic language and so made accessible to the same treatment which systems of principles of mathematics are receiving, how wonderful the possibilities!

Further methods could be made available, such as the "method of limitation and extension," "the hypothetical method." But more important, perhaps, than any suggestion of procedure is the replacing of the petty criticizing spirit prevailing among us philosophers by the mutual understanding of cooperation. As the problems become crystallized and purged of their antiquated, impure statements, as philosophers become more and more conscious of the true infinity of their special problems, and how often antagonism is really based on differences in the generating problems, philosophy will be developed as a system, not of individuals, but of humanity itself.

KARL SCHMIDT.

PEQUAKET, N. H.

[13] Incidentally, I may call attention to Lüroth's remark in the posthumous edition of the second part of volume two of Schröder's "Algebra der Logik," that it is doubtful whether it will be possible to bring together the material for the second part of volume three, which was to treat of the *logical* side of the algebra of relatives.

## CAN BINOCULAR RIVALRY BE SUPPRESSED BY PRACTISE?

ON page 280 in Charles S. Myers's "Text-book of Experimental Psychology," 1909, is the following statement under the heading of binocular rivalry:

> When corresponding points are stimulated by unlike stimuli, either combination or rivalry results. Colored squares of equal size and brightness may be combined without difficulty. The more the two presentations differ in contour or in brightness, or the more they are incongruous in general meaning, the more impossible becomes binocular combination. Instead of combining, the two impressions alternate, sometimes one, sometimes the other, occupying the field of consciousness. The field can be to a great extent limited to one or other eye by the control of attention or by the relative intensity or insistence of the sensations, either retinal or muscular, derived from the two eyes. *One of the images can be completely suppressed by practise.*[1]

The last statement in this quotation is so much at variance with the results which I have obtained in my experiments in binocular rivalry, that I venture to restate some of them. During the years 1898 and 1899 I carried on a series of experiments[2] in binocular rivalry and many of these experiments have been repeated at intervals during the last ten years, some of them within the last year. In every case I have found uniformity of results. The suppression of one of the images which Professor Myers speaks of as a fact in binocular rivalry was one of the problems in my experiments. The stimuli which I used in order to bring about the rivalry were red and green squares, ten millimeters in size. These squares were crossed by black diagonal lines. Upon the red field the direction of the lines was from the upper left-hand corner to the lower right-hand corner, while the lines upon the green field ran from the upper right-hand corner to the lower left-hand corner, so that when the fields were combined the lines crossed each other at right angles. A modification of the Brewster stereoscope was used for combining the fields. The first experiment was to determine whether the will was effective in suppressing one of the fluctuating images. I used nine subjects. In no single case was any subject able to control the rivalry to more than a very limited extent. No subject was able to reduce the number of rivalry phases which took place in any given time. The attempt to hold the red field, which was the field presented to the right eye, resulted in lengthening the time this field remained in consciousness by only 15 per cent., while the attempt to hold the green field, the field presented to the left eye, gave an

[1] Italics mine.

[2] Monograph Supplements, *Psychological Review*, Vol. III., No. 1.

increase in time for this field of 16 per cent. That is, the subjects by will power could increase the length of time of the normal rivalry phase of either of the images by 15 to 16 per cent. This increase was brought about by fixing the attention upon the image which the subject wished to hold in consciousness to the exclusion of the other image. None of the subjects had had *extensive* practise in attempting to suppress the rivalry. Some of them persisted through four or five sittings in their attempt to do so, but were unsuccessful. However, in my own case I have tried at different times during the last ten years to bring about the suppression of rivalry which Professor Myers reports as an established fact in his "Text Book of Experimental Psychology."

This practise in attempting to suppress one of the images has been carried on under many conditions. I have used a moving field for one eye with the field for the other eye at rest; fields of different areas; a field of figures opposed to one without figures; lights of different intensities for the two fields, and yet I have found no condition wherein one of the images can be suppressed. I have found this to be true, however, with naïve subjects: During the few minutes when the phenomenon of binocular rivalry was first presented to them, they claimed that they were able to hold one of the images in consciousness and to suppress the other, but such subjects on further experience, and more careful observation, found that they were not able to do what at first they thought they had done.

Another form of experiment in binocular rivalry has likewise been unsuccessful so far as suppression of one of the two rivalry images is concerned. I had eye-glasses prepared with red and green lenses. When these were adjusted only red light of a medium intensity entered the right eye, and only green light of the same intensity entered the left eye. The outer world then appeared to me alternately red and green, following the law of binocular rivalry. I have worn these eye-glasses for days at a time, but the rivalry was never suppressed by this practise. In this form of the experiment a possible error in observation might arise for the untrained observer, from the fact that shortly after the glasses are placed before the eyes, the sensations of color arising from the two differently colored lenses run down to such a degree that it is difficult to distinguish the changes of the rivalry because of the paleness of the alternating colors. However, I have always been able to detect the presence of rivalry between the red and green fields under all conditions.

B. B. BREESE.

UNIVERSITY OF CINCINNATI.

## AN ENGLISH EQUIVALENT OF "COMBINATIONS-METHODE"

THE recent death of Professor Ebbinghaus has again called my attention to the fact that it has become quite a habit among English-speaking psychologists to translate his "Combinationsmethode" of testing intellectual functions by "combination method" I wish to call attention to the fact that this is in no sense a translation of the term used by Ebbinghaus. The German words "Combination, combinieren," have all the meanings of the English words *combination* and *to combine;* but the German words have an additional meaning which in English is entirely lacking. An example may serve to make this clear. If we say in German that a man possesses "Combinationsgabe," this means that he has a talent for drawing conclusions from premises which do not very readily present themselves to a man's consciousness as items of a unitary logical thought, but which, *as soon as they are combined,* suggest the conclusion very forcefully. Now, the English word combination has no such meaning, and therefore, Combinationsgabe can not be translated talent for combination. That English-speaking psychologists have failed to notice this special meaning of the German word is easily understood; for the word is rarely used in this sense in literature, very frequently, however, in the ordinary conversation of the business man, the politician, the financier. Professor Ebbinghaus, being fond of impressive language, used the word in its conversational sense when he called his method of making the subject conjecture the words omitted from a text, the "Combinationsmethode." The English "combination method" is as little a translation of the German "Combinationsmethode" as the English "school knaves" would be a translation of the German "Schulknaben," that is, schoolboys. I have both in writing and orally used the term "conjectural method" as the equivalent of "Combinationsmethode"; and, since in my opinion this is the nearest approach in English to what Professor Ebbinghaus actually meant, I recommend its use to my fellow psychologists. He might have used in German, too, the phrase "Conjecturmethode," but, obviously, did not use this because it is rarely used in German outside the circles of the philologists, whereas the phrase "Combinationsmethode" immediately appeals to the public at large.

MAX MEYER.

UNIVERSITY OF MISSOURI.

## REVIEWS AND ABSTRACTS OF LITERATURE

*The Metaphysics of Nature.* CARVETH READ. Second edition. London: Adam and Charles Black. 1908.

The second edition of Professor Read's book is distinguished by fifteen pages of appendices, on "Truth," "Consciousness," "Being," and "the Soul and Freedom." In other respects the edition is substantially the same as the first. The appendices are offered as clarification and further elaboration of the main doctrines of the book; but it must be confessed that they serve this purpose with but doubtful success. One would expect an essay on "Truth" to be vibrant with the searching discussion which has occurred during the past few years. Professor Read's appendix gives little hint that anything whatever has occurred since the days of Kant and Spencer. He reiterates his general conclusion, given on page 73 of the first edition, that "truth requires clear and distinct conceptions and judgments, cohering with reality, and harmonizing among themselves according to the analogy of experience: the reality with which true judgments must cohere is empirical reality, or human perception, their harmony is logical consistency and systematic coordination under the principle of causality." The very words are battle cries and alarms! It is true that Professor Read takes cognizance of present-day controversy by discussing the "copy-theory" of truth. Whether truth is a "copy" of reality, he says, "depends, in the first place, upon what is meant by "reality." If it means some possible mode of being that is not and can not be perceived, nor yet conceived from sensory data and in analogy with perception, we can not strictly be said to *know* of any such being, and, therefore, can not know whether any doctrine of ours is to copy it" (p. 357). This, however, is for him no ground for dismissing transcendent being, but simply for relegating it to "that background of belief out of which knowledge has been differentiated." Truth (and knowledge) therefore lies wholly within the sphere of empirical reality. Granted this, "the truth of perception is not a copy of [empirical reality], but, so far as perception is immediate sensation, it is reality itself. So far, however, as certain qualities of an object perceived are not immediately sensed but are subrepresented, such as the hardness of the rock which I see, the truth of perception depends upon a sort of 'copying,' or (as I prefer to say) correspondence, which may be verified by touching the rock" (p. 359). Further, truth is not simply a personal matter, but is one "in which generations have cooperated." Perception and conception, moreover, are in large measure symbolic.

Much of this is obviously true; but much of it is obscure, and more of it is questionable. Not to speak of its failure as a criterion of value-truths, and of the insufficiency of its vague empiricism, the view leaves us, at best, with the old static conception of truth and reality, yielding no clear word upon the problem which is, at the present time, pressing so hard for solution—the problem of "reality in the making." The essay is typical of the character of the whole book: it is distinctly not on the firing-line of philosophic thought.

A like inadequacy is betrayed in the attempt to elaborate the concept of consciousness. The author makes the surprising admission: "The term consciousness has a very conspicuous place in the *Metaphysics of Nature;* and friends have asked what I mean by it. It seems that I have nowhere tried to explain what consciousness is: having assumed, in fact, that everybody knows." The confession is frank; yet it is startling from a metaphysician who writes, with emphasis, "Consciousness is reality; is all we know of reality; is not a phenomenon," and who speaks as lightly and easily of "generic consciousness" as if it were a matter of every-day acceptance.

Although the author confesses himself to have been awakened from his dogmatic slumbers by Professor James's article, "Does Consciousness Exist?" one wonders how fully he has been aroused. His own definition is not reassuring: "Consciousness, then, is the totality of experience or awareness in the world, awareness of things, images, relations, feelings, however clear and distinct, or obscure and undifferentiated. There is no 'diaphaneity' about it; it is always actual, concrete, particular in itself (though its significance may be general). And consciousness is the best name for it: an undefinable name, of course; of which 'experience' and 'awareness,' though sometimes convenient substitutes, are not adequate synonyms. Consciousness has the greatest simplicity and universality of denotation" (p. 360).

Professor Read goes so far as to hold that consciousness is not a substance, but an activity, and to analyze consciousness into focal and marginal phases. In both cases, however, the discussion betrays a distressing lack of thoroughness of discussion and penetrating subtlety. The central position of the author deserves notice: "We should never speak of phenomena or any mode of experience as related to consciousness; for each phenomenon or experience, as far as it extends, is identical with consciousness. Consciousness is not definitely related to anything else; there is no positive term without it. All complete relations fall within consciousness" (p. 362).

Important, however, as this position is, it has not been defended with exhaustive care. This defect becomes particularly apparent when the reader is introduced to the culminating doctrine of the book, that transcendent being has two activities, consciousness and manifestation. Here it is imperative that the reader know the manner of the inclusiveness of consciousness and how this inclusiveness is related to the non-inclusiveness indicated in the statement: "Must we not attribute another activity to being whereby it is known objectively, besides the activity which is consciousness; and if so, must we not consider these activities as correlative?" (p. 368). This seems strangely at variance with the statement: "Consciousness is not definitely related to anything else; there is no positive term without it" (p. 362).

A graver difficulty lies in the assumption of generic consciousness. Professor Read disposes of a matter of the utmost significance with such inconclusive words as these: "In connection with this position, the conception of what I have called 'generic consciousness' (p. 332) seems to

me to have some interest for epistemology. It is admitted that we pass a good many months of infancy before we become distinctly aware of our individuality and personality, and that meanwhile we gradually become distinctly aware of things and the properties and movements of things around us. As persons we seem to be born into a world which pre-existed and is independent of us: it is not the work of self-consciousness. But it is the work of generic consciousness, without which being would not constitute an actual world. Generic consciousness, then, is the objectivity and necessity of nature in space and time, and all the categories are immanent there" (p. 364). It is impossible for the reviewer to criticize the last sentence, for he must confess that it is quite beyond his comprehension. And yet he feels that the author has something in mind that is of real importance.

The nerve of the book is its doctrine of transcendent being. In the text of the first edition, this doctrine was left in sad obscurity. The appendix attempts further elucidation. It turns out, however, to be little more than a recapitulation, which leaves the original difficulties really unsolved. "What is that thing in space which we all agree in perceiving, though it is a different perception for each of us? . . . We may most simply answer all these questions by supposing some condition of a phenomenon which needs, for the actuality of that phenomenon, that the conditions of a perceptual consciousness should be present. That condition I call being" (p. 365). "The criticism of 'being' shows that by itself it is necessarily empty. It can not be genuinely thought . . . but, by construction, being is an abstraction from consciousness . . . and it is only an indicative or orective category" (p. 366). Can we get any work out of this notion, he asks, in spite of its emptiness? "I propose to regard personal consciousness as a function, or activity, or (as it might be best to say) the actuality of that being of which the body is the phenomenon. Again, as we have seen that consciousness is a continuum without beginning, and that it may be supposed to accompany in some degree all phenomena, I propose to attribute it to the being of those phenomena. By that means we are able to think of the world as existing independently of us before we existed, inasmuch as its consciousness can be thought of by its resemblance to our own" (p. 366).

Being is further characterized as possessing the universal characteristics of the consciousness: "The argument is that (1) consciousness is reality, (2) that it is a factor of *all* reality, (3) that it is on a different level from the organism as a phenomenon, and that, therefore, we may transfer to being some of the attributes of consciousness, but not with equal confidence the attributes of phenomena, which are constructions in consciousness upon an otherwise unknown condition" (p. 367). But the inference that consciousness is more truly real than phenomena, is not justified in the argument. It rests upon the assumption that phenomena are *simply within* consciousness. Later, however, phenomena are held to be manifestations of being *correlative* with consciousness. So far as the argument goes, then, there is no reason to hold that consciousness is more truly real or more truly indicative of the nature of reality than

phenomena. The whole doctrine of transcendent being, in short, is developed with so little care that it can not be allowed to stand even as a plausible metaphysical hypothesis.

Criticism must be offered, too, of what is said of the continuity of consciousness, and of the "activity of manifestation." Neither in the original text nor in the appendix are these views clearly expounded. The same is true of the doctrine of *Allbeseelung*. This view, while central for the author, is scarcely more than outlined: certainly, its more serious difficulties are not even faced.

But the greatest defect of the book is its inadequate treatment of the concepts of time, space, and change. With regard to the new efforts to achieve a dynamic metaphysics the book really takes no stand. It is so largely concerned with the recapitulation of older views that it has neither time for nor interest in the newer developments of thought. One would suppose that a metaphysics of nature would at least take cognizance of such work as that of Mach, Ostwald, Pearson, Russell, Ward, Avenarius. If these men are mentioned at all—and some of the names do not even appear on the pages—it is only in swift passing, never in the serious effort to grapple with their views. In short, as a metaphysics of *nature*—so sadly needed—the book is far from being a success. With its ponderous effort to build up an empty hypothesis, it will serve as one more cause for scientists to smile at the vague futilities of philosophy.

H. A. Overstreet.

University of California.

*A Text-book of Psychology.* Edward Bradford Titchener. Part I. New York: The Macmillan Company. 1909. Pp. xvi + 311. $1.50.

The scope of this book is indicated by the following quotation from the preface: "The present work has been written to take the place of my 'Outline of Psychology.' The 'Outline,' which was stereotyped in 1896, had long passed beyond the possibility of revision, and the continued demand for it showed that there was still room in the science for a text-book which set experimental methods and experimental results in the forefront of discussion." As compared with the "Outline," the present "Text-book" bids fair, when its second volume is added, to run to about twice the size. In regard to style, it has by no means, as the author had feared, lost any of "the freshness and vigor of the first writing." It is distinctly written for students rather than for the psychologist; the student and his needs are constantly borne in mind, and uncommon care is taken to interest him in the questions at issue before plunging him into the sea of psychological discussion.

The present volume covers the quality and intensity of sensation, feeling, and attention. There is also a brief chapter on synesthesia and the image.

The primary emphasis of the book is on the descriptive, or analytic, type of psychologizing—on the discovery of conscious elements and their manner of combination. But teachers who prefer to lay the emphasis elsewhere will be glad to see that the treatment is by no means one-sided

in this respect, since each chapter contains a careful study of the dependence of the conscious event on the stimulus and of its probable physiological interpretation. For example, the chapter on vision, which contains 34 pages as compared with six in the earlier work, owes its increased size mostly to the inclusion of such topics as contrast, adaptation, peripheral vision, color blindness, and the physiological theories of color vision; and the newer and older treatments of the other senses compare in much the same way. At the same time, much of the new matter is introspective; some of it consists of minute and yet graphic descriptions of particular sensory experiences. For example (p. 146): "If with the point of a pencil you brush one of the hairs that are sparsely scattered over the back of the hand, you obtain a weak sensation, of bright quality, which is somewhat ticklish, and which though thin and wiry yet has a definite body. . . . As the pressure [on the skin] is increased, the sensation too becomes heavier, more solid: at times it has about it something springy, tremulous, elastic; at times it appears simply as a little cylinder of compact pressure. Finally, at still higher intensities, the sensation becomes granular: it is as if you were pressing upon a small hard seed embedded in the substance of the skin. The granular sensation is often tinged with a faint ache, due to the admixture of a pain sensation; and is sometimes attended by a dull, diffuse sensation derived from the subcutaneous tissues."

Many changes in the subject-matter are due to the progress of the science; old conclusions have been abandoned, old theories modified. The author's method is to present the conclusions which seem to him the best at the present time; to admit that there is doubt as to their final validity, but not to worry the student with a maze of conflicting views and evidence. His judgment as to which conclusions have the best claim to be so presented will, probably, at most points, meet with general approval. In the chapter on "affection," he is frankly on controversial ground, and abandons to some extent his usual method, threshing out conflicting views with considerable labor. It is doubtful if the student can winnow enough grain from this chapter to pay for the labor. If the descriptive psychology of feeling must begin with the statement (p. 231) that "affection lacks the attribute of clearness," then it may as well end right at that point. If it is of the nature of feeling that "we can not attend to an affection at all; if we attempt to do so, the pleasantness or unpleasantness at once eludes us and disappears, and we find ourselves contemplating some obtrusive sensation or image which we had no desire to observe"—then the psychologist should take this fact to heart and devote his attention to something less inaccessible.

The chapter on attention also is debatable ground, but here there is much of undoubted value, regarding the conditions of attention, its development, range, duration, and accommodation. The purely descriptive psychology of the attentive consciousness, however, seems to reduce to the statements that attention is equivalent to clearness, and that there may simultaneously be present in consciousness parts that are clear and parts that are not clear. Now "clearness" must be admitted to be a figure of

speech, and the relevance of the figure is so far defined only negatively. Clearness is distinguished from intensity of sensation, since we can attend to a weak stimulus; it might also be distinguished from simplicity, since we can attend to a complex clang as well as to a pure tone; from distinctness or precision, since we can attend to an object in indirect vision to the neglect of the better-defined object in direct vision; and from any characteristic of sensation you please, since any one can either be or not be the object of attention. It would seem, further, that clearness can not be identified with prominence in consciousness, since the feelings, which can not be clear, can certainly be prominent. In short, the attempt to describe the consciousness of a moment as made up of the clear and the unclear leads to a curious paradox. For the fundamental distinction between the clear and the unclear can not be made in purely descriptive terms, and does not arise within any moment considered by itself. To reach a distinction between the clear and the unclear, each of them must receive some measure of attention; but the unclear is just that which is not attended to, and this precludes the making of the distinction. No one can say at any moment, "This I am attending to, while that I am not attending to." It would have to be, "That I was not attending to a moment ago," and the "that" would be an object, not an item of consciousness. The former item has been replaced by a new one; consciousness has changed, and in so far as the change is one in the distribution of clearness, it can only be defined by reference to the objects apprehended. Clearness, in relation to attention, can mean only clearness in the apprehension of objects, and the test of clearness can not be found in any one moment of consciousness. Attention offers no genuine problem to the descriptive psychologist; the questions which it raises are of a dynamic or of a physiological nature. In reality, it is to such questions that the bulk of the author's chapter on attention is devoted; the description of the attentive consciousness, though ostensibly the main purpose of the chapter, can easily be relegated to the background. All in all, with the probable exception of the chapter on feeling, the book can be used to good advantage by teachers of varying shades of opinion regarding the proper emphasis in psychology; and they will await the appearance of the second volume with unusual interest.

R. S. WOODWORTH.

COLUMBIA UNIVERSITY.

---

## JOURNALS AND NEW BOOKS

ZEITSCHRIFT FUR PSYCHOLOGIE. Bd. 53, Heft 2 and 3, September 2, 1909. *Über die heterochrome Helligkeitsvergleichung* (pp. 113–179): DR. HERBERT SIDNEY LANGFELD. – Direct heterochromatic brightness comparisons are possible and with practise yield constant results. The same color varies in apparent brightness with the "Einstellung" of the observer. Attention to color tone decreases brightness. With "Einstellung" toward brightness the usual order of yellow, orange, red, is reversed. Discussion of methods of color photometry with complete

bibliography. *Die hypnotische Beeinflussung der Farbenwornehmung und die Helmholtz'sche Theorie vom Simultankontrast* (pp. 179–206): MAX LEVY-SUBL. – (*a*) Through post-hypnotic suggestion the mental conditions demanded by the Helmholtz theory were produced. (*b*) While the physiological factors were influencing the visual apparatus the mental conditions were ruled out by suggested negative hallucination. (*c*) In no case was their evidence of the influence of the psychical factors required by the Helmholtz theory of simultaneous contrast. All facts point toward physiological explanation. *Zum Traumproblem* (pp. 206–224): SEMI MEYER. – Objections to the doctrine of the hallucinatory character of dream objects. The apparent hallucination of dreams reduced to the principle of the relativity of all psychical intensities. *Reviews:* R. R. Gurley, *Chapters for a Biological-empirical Psychology:* KOFFKA. W. Wirth, *Die Experimentelle Analyse der Bewusstseinsphänomene:* D. KATY. Richard Herbertz, *Bewusstsein und Unbewussters:* OESTERREICH. Ch. H. Judd, *The Doctrine of Attitudes:* LIPMANN. K. Brodmann, *Beiträge zur histologischen Lokalization der Grosshirnrinde:* KAPPERS. Horsley and Clarke, *The Structure and Functions of the Cerebellum Examined by a New Method:* KAPPERS. M. v. Rohr, *Abhandlung zur Geschichte des Stereoskops von Wheatstone, Brewster, Riddell, Helmholtz, Wenham, d'Almeida und Hormer:* KÖLLNER. E. B. Titchener, *A Demonstrational Color-Pyramid:* KOFFKA. A. Basler, *Über das Sehen von Bewegungen:* KÖLLNER. Ch. S. Meyers, *Some Observations on the Development of the Color Sense:* KÖLLNER. C. E. Ferree, *The Streaming Phenomena:* AALL. A. de Vries and M. F. Washburn, *A Study of Retinal Rivalry in the After Image:* KOFFKA. Diefendorf and Dodge, *An Experimental Study of the Ocular Reactions of the Insane from Photographic Records:* KÖLLNER. A. Pick, *Über Hyperästhesie der Peripherischen Retinaabschnitte:* UMPFENBACH. H. Beyer, *Studien über die sogenannten Schalleitungsapparat bei den Wirbeltieren und Betrachtungen über die Funktion des Schneckenfensters:* AUTORREFERAT. Bryant, *Die Schnecke und ihre verallgemeinerte Empfänglichkeit für Toneindrücke:* BEYER. Wojatschek, *Über einige paradoxe Fälle bei der funktionellen Prüfung des Labyrinthes:* BEYER. J. C. Bell, *The Effect of Suggestion upon the Reproduction of Triangles and of Point Distances:* AALL. Alrutz, *Är den s. K. sjoormen en illusion?* AALL. Lefevre, *Les echelons de l'intellectualité:* GIESSLER. T. P. Bailey, *Organic Sensation and Organism Feeling:* GROETHBUYSEN. E. Reinhard, *Der Ausdruck von Lust und Unlust in der Lyrik:* GROETHBUYSEN. Ch. Lalo, *Le nouveau sentimentalisme esthétique:* GROETHBUYSEN. E. Utitz, *Kritische Vorbemerkungen zur einer ästhetischen Farbenlehre:* PRANDTL. E. Utitz, *Gründzüge der Ästhetischen Farbenlehre:* PRANDTL. Rich. Müller-Freinfels, *Die Bedeutung des Ästhetischen für die Ethik:* KRIEBIG. G. C. Ferrari, *La psicologia degli scampati al terremoto di Messina:* ALLERS. D. Provenzali, *Il terremoto di Messina:* L. PORMEGGIANI. *A proposito del terremoto di Messina:* ALLERS. E. Moravcsik, *Über einzelne motorischen Erscheinungen Geisteskrancker:* UMPFENBACH. Beruh, Risch, *Über die phantastische Form des degenerativen Irreseins (Pseudologia phantastica):* UMPFEN-

BACH. Pierre Janet, *La perte des sentiments de valeur dans la depression mentale:* UMPFENBACH. M. C. Schuyten, *Over Broodopname bij Kinderen en de Jaarcurve der Levensenergie. Esthenometrische onderzoeknigen op volwossen leerlingen die een avoudcursus volgen. Linkshandigkeit der bovenste ledematen en verstandelijke boogte bij kinderen:* GIESSLER. R. Cousinet, *La Solidarité enfantine: étude de psychologie sociale:* GIESSLER. E. Siemmerling, *Über nervöse und psychische Störungen der Jugend:* WAGNER.

THE INTERNATIONAL JOURNAL OF ETHICS. October, 1909. *Meaning of Literature for Philosophy* (pp. 1–9): ERNEST ALBEE. – Literature is neither philosophy nor criticism, but a direct interpretation of life and, as such, well worthy of philosophic consideration. *The Unique Case of Socrates* (pp. 10–28): CHARLES M. BAKEWELL. – Socrates, asserting at once the individual and common nature of truth, was himself regarded as the living embodiment of that truth. *Knowledge and Practice* (pp. 29–47): J. E. CREIGHTON. – Philosophy becomes the guide of life when the desire for wisdom enters into mind as its dominant purpose, which necessarily expresses itself in the life of practise. *Religion and the Psychical Life* (pp. 48–62): EDWARD SCRIBNER AMES. – The religious nature is not something distinguishable and separable in any mechanical way, but is one of the functional selves. Faith and prayer are not uniquely religious, but fundamental characteristics of all conscious life. *The Organization of Truth* (pp. 63–71): JOHN W. BUCKHAM. – The organization of truth rests upon the central principle of personality. In order of value we have moral truth, practical truth, theoretical truth. These are not separate, but united in personality. *Ethics and Politics* (pp. 72–86): R. M. MACIVER. – There can be no theoretical conflict between ethics and politics, since the latter regards man simply as a member of political society while the former regards him in his concreteness as a human being. There may be a conflict between the public and individual conception of the good. *Religion and Morality* (pp. 87–92): H. W. WRIGHT. – Religion is the final step in self-organization by which man adjusts himself to the universe. His religious concepts are influenced by his moral status. *Discussion: Mr. Benn on Nietzsche:* an Explanation: H. L. STEWART and A. W. BENN. *Book Reviews:* Westermarck, *The Origin and Development of the Moral Ideas:* J. ELLIS MCTAGGART. G. Lowes Dickinson, *Justice and Liberty:* T. WHITTAKER. G. Lowes Dickinson, *Is Immortality Desirable?* J. E. CREIGHTON. Rufus M. Jones, *Studies in Mystical Religion:* NATHANIEL SCHMIDT. Chas. Elsee, *Neoplatonism in Relation to Christianity:* T. WHITTAKER. S. Schechter, *Some Aspects of Rabbinic Theology:* J. A. MONTGOMERY. Paul Carus, *God: An Enquiry into the Nature of Man's Highest Ideal:* NATHANIEL SCHMIDT. J. B. Pratt, *What is Pragmatism?* A. SCHINZ. John Morley, *Miscellanies:* G. P. GROCH. F. Paulsen, *Aus Meinen Leben:* FRANK THILLY.

Farnsworth, Charles Hubert. *Education Through Music.* New York, Cincinnati, and Chicago: The American Book Co. 1909. Pp. 208. $1.00.

Garrigou-Lagrange, Fr. R. *Le sens commun, la philosophie de l'être, et les formules dogmatique; Valeur de la critique moderniste des preuves Thomistes de l'existence de Dieu.* Paris: Gabriel Beauchesne & Cie. 1909. Pp. xxx + 311. 3 fr. 50.

*Journals of Ralph Waldo Emerson, with Annotations.* 1824–1832. Edited by Edward Waldo Emerson and Waldo Emerson Forbes. 2 Vols. Boston and New York: Houghton, Mifflin Co. The Riverside Press, Cambridge. 1909. Vol. I. *College.* Pp. xix + 394. $1.75 net. Vol. II. *Teacher and Divinity Student.* Pp. xvi + 542. $1.75 net.

Gamble, Eleanor McC. *Wellesley Studies in Psychology.* No. I. *A Study in Memorizing Various Materials by the Reconstruction Method.* Psychological Monograph, Vol. X., No. 4, September, 1909. Whole No. 43. *The Psychological Review.* Lancaster, Pa., and Baltimore, Md.: The Review Publishing Co. Pp. xii + 210.

Mignard, Dr. M. *La Joie passive: Étude de psychologie pathologique.* Préface de M. la Dr. G. Dumas. Paris: Félix Alcan. 1909. Pp. xii + 276. 4 fr.

---

## NOTES AND NEWS

### Early American Philosophers

The American Philosophical Association at its annual meeting in Baltimore, December 28, 1908, made an appropriation for the compilation of a bibliography of early American philosophy. It also recommended that a special committee should seek to forward the publication of the more important works of early American philosophers. As the beginning of a projected series the Columbia University Press was authorized to reprint, under the auspices of the association, the "Elementa Philosophica" of Samuel Johnson, first president of Kings College, New York, and a devoted and able disciple of Bishop George Berkeley. The expense of publication has been guaranteed by a friend of the university.

This generous undertaking has led the committee to draw up a tentative list of philosophical Americana, in the hope that other universities and colleges, and historical societies may help to put these and similar works in permanent and accessible form. As representing the philosophical speculations of the foremost colonial colleges the following works are suggested: At Harvard, the Dudleian Lectures (1750–1850); at Yale, selections from Jonathan Edwards (1703–1758); at Kings College, Samuel Johnson's "Elementa Philosophica," Philadelphia, 1752 (printed by Benjamin Franklin); at Princeton, President John Witherspoon's "Lectures on Moral Philosophy," Third Edition, Philadelphia, 1810; at the University of Pennsylvania, Benjamin Rush's "Diseases of the Mind," Philadelphia, 1812; at the University of Virginia, selections from Thomas Jefferson (1743–1826).

In authorizing the use of its name in connection with such works as the committee approve, the American Philosophical Association aims to encourage the publication of volumes of intrinsic and historical importance under competent editorial supervision, so that the writings and their authors may appear in their proper historical setting, and it is believed that the scheme proposed offers an unique opportunity to friends of the institutions concerned, to descendants of the authors, and to others interested to aid, at comparatively slight expense, in promoting the recognition due to our native American thinkers. The cooperation of those who are in sympathy with the enterprise is respectfully solicited.

I. Woodbridge Riley, Vassar College, acting chairman; H. N. Gardiner, Smith College; Josiah Royce, Harvard University; E. L. Becelaere, Convent of the Visitation, Georgetown, Kentucky; A. L. Jones, Columbia University; F. J. E. Woodbridge, Columbia University; J. E. Creighton, Cornell University.

*Committee.*

POUGHKEEPSIE, N. Y., December, 1909.

---

THE following note is taken from the *Athenæum* for November 27: "M. Lucien Poincaré, writing in 1906, pointed out that the length of the terrestrial arc, of which the Standard Metre is supposed to be the ten-millionth part, is longer than it was estimated to be when the standard was adopted; and that therefore this standard, although a miracle of precision in its day, is not now an absolutely trustworthy measure of length. At the same time he drew attention to the fact that an invariable measure of length is to our hand in the distance covered by a given radiation during one vibration, and he thought that a day might come when very small distances between given points might be measured in terms of wave-lengths of light. This prediction, which can be found in M. Poincaré's 'La Physique moderne, son Evolution,' translated into English two years ago, has now been realized in the Wave-Length Comparator of Dr. A. E. H. Tutton, of which an account is given in the current *Proceedings* of the Royal Society, and at greater length in the *Philosophical Transactions* of the same body. The principle of the new comparator is that of the author's interferometer, its essential feature being that one of the two microscopes employed to focus the two defining lines on a standard bar carries, just above the objective, one of the two glass plates of the interference apparatus, which reflect the monochromatic light (hydrogen or cadmium red radiation) thus made to interfere and produce rectilinear dark bands. It is proposed to use the device for producing copies, as nearly accurate as may be, of the Imperial Standard Yard, and some idea of its delicacy may be judged from the fact that a single wave-length of red light is roughly the forty-thousandth part of an inch, and that readings on polished speculum metal of this incredible minuteness have actually been made by Mr. J. H. Grayson of Melbourne for use with the apparatus."

THE following summary of the paper read before the Aristotelian Society by its president, Mr. S. Alexander, at the meeting on November 1, is from the *Athenæum* for November 13. The paper "continued the inquiry that occupied his address of last year, and developed an alternative doctrine to that of Mr. Stout given in the last paper of the recent volume of *Proceedings*. The paper dealt chiefly with images, of which the author endeavored to explain the physical character, declaring them to be different physical appearances of the same thing as appeared also in perception. Imagination brings us in face of physical objects as perception does, only that in the latter case the act of consciousness is evoked by the direct action of the thing on the sense organs, while in the former case it is evoked indirectly by some internal cause. But the appropriate mental attitude being attained, the object is equally revealed. The paper went on to show how upon this view the mind contributed to the our known world, not by adding interpretations from itself, but by bringing into view supplementary appearances of the object. Hence the real nature of things could be learnt from the combined testimony of different minds, which all of them observed different aspects of the same thing. When error took place, it was due to interference from the mind which dislocated the appearances of things, referring them to each other in false connections. The paper also dealt with the difficulties of the position that sensed appearances are physical, and with the metaphysical relations of sensations, perceptions, images, and thoughts."

THE subject selected by the American Philosophical Association for discussion at the meeting to be held in New Haven, December 27–29, is: The Problem of Time in its Relation to Present Tendencies in Philosophy. In order to define more exactly the question at issue, it has been suggested that members intending to take part in the discussion keep in mind the following references: Royce, "The World and the Individual," Vol. II., pp. 109–151; McTaggart, "The Unreality of Time," *Mind,* 1908; "The Relation of Time and Eternity," *Mind,* 1909; Lovejoy, "The Obselescence of the Eternal," *Philosophical Review,* 1909; Bergson, "L'évolution créatrice," Chapters I. and IV.; James, "A Pluralistic Universe."

THE secretary of the association, Professor Frank Thilly, makes also the following announcement: The Trunk Line Association and New England Passenger Association will allow stop-over privileges at New Haven, Conn., on the outward trip, from December 27 to 29 inclusive, for persons holding tickets reading via that point to Boston in connection with certificates issued on account of the meeting of the American Association for the Advancement of Science, in order to enable them to attend the meeting of the American Philosophical Association, to be held at New Haven, Conn., December 27–29. A reduction of fare is made only to persons holding tickets to Boston, who are members of the American Psychological Association or the American Association for the Advancement of Science.

FORTY-SEVEN Chinese students have come to this country to enter different colleges at the expense of the Chinese government. They will be

followed next year by 153 students, and the 200 students will be educated in this country with the indemnity growing out of the Boxer troubles and returned by our government to China. The whole sum will be devoted to educational work. Students will be sent to from China after earning appointments by competitive examinations. Each student is to study five years in American schools. The students are in charge of Tong Kwoh On, of the Chinese Foreign Office, a graduate of Yale University.

THE first number of the *Journal of Educational Psychology* is promised for January, 1910. The editors are W. C. Bagley, of the University of Illinois; J. Carleton Bell, of the Brooklyn Training School for Teachers; C. E. Seashore, of the State University of Iowa, and Guy Montrose Whipple, of Cornell University. The editors will have the assistance of a staff of thirty-eight collaborators.

PROFESSOR JOSEPH JASTROW, of the department of psychology in the University of Wisconsin, has been appointed by the trustees of Columbia University to give graduate courses in psychology in that institution during the second semester of this year, and to deliver a series of eight public lectures.

PROFESSOR E. MEUMENN, of the University of Münster, has been appointed to fill the chair at Halle left vacant by the death of Professor Ebbinghaus. The editorship of the *Zeitschrift für Psychologie,* formerly held by Professor Ebbinghaus, has fallen to Professor F. Schaumann, of Zurich.

DR. G. P. ADAMS, instructor in philosophy at the University of California, has been appointed adjunct professor in that university, and Dr. De Witt Parker has been called from Harvard University to become instructor in philosophy at Berkeley.

THE Southern Society for Philosophy and Psychology will hold its fifth annual meeting at Charlotte, North Carolina, on December 28 and the following days, in affiliation with the Southern Educational Association.

DR. B. ERDMANN, professor in philosophy at the University at Bonn, has been appointed to succeed Professor Paulsen in the chair of philosophy and pedagogy at the University of Berlin.

THE University of Leipzig in its recent celebration conferred upon Dr. James Ward, professor in philosophy at the University of Cambridge, the degree of Doctor of Philosophy.